Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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COVID-19 AND COXSACKIE B COINFECTION: A RARE CASE OF ACUTE PERICARDITIS

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INTRODUCTION: COVID-19 primarily causes pulmonary symptoms, but extra-pulmonary manifestations are also prevalent. Case reports are published linking COVID 19 with acute pericarditis. However, to our knowledge, this is the first case presenting pericarditis caused by COVID 19 and Coxsackieviruses B (CV-B) co-infection. It is essential to keep the differentials broad, especially during the COVID-19 epidemic where bias may exist to attribute all manifestations to COVID 19 virus only.

CASE PRESENTATION: A 68 year-old-male with heart failure with an ejection fraction of 35% and coronary artery disease presents with three days of shortness of breath and weakness. Initially, the patient's COVID RT-PCR was positive and oxygen saturation more than 92%, not requiring supplemental oxygen. Chest x-ray revealed right lower lobe infiltrate. EKG revealed normal sinus rhythm, with no ST-T wave changes. Transthoracic echocardiogram (TTE) revealed LVEF to be 30% without any pericardial effusion. The patient is admitted to ICU with a diagnosis of exacerbation of systolic heart failure and community-acquired pneumonia. On day 7 of hospitalization, the patient complained of sharp chest pain worsening in a supine position and was relieved by leaning forward. Pericardial friction rubs not appreciated due to loud breath sounds from Bi-PAP. Repeat EKG revealed PR segment depression in V1-V3, and troponin levels were normal. Titers for CV-B (B1-B6) Antibodies were high - 1:128, 1:128, 1:32, 1:128, 1:256 and 1:64 respectively, suggesting recent CV-B infection. During the hospital course, repeat TTE did not reveal any effusion. Diagnosis of acute pericarditis secondary to COVID 19 and CV-B co-infection treated with colchicine, aspirin, and dexamethasone.

DISCUSSION: Cardiovascular complications from COVID 19 are associated with poor prognosis [1]. Some of the cardiac complications from COVID 19 include ventricular dysfunction, arrhythmias, myocarditis, and pericarditis. Underlying cardiac injury is thought to be via angiotensin-converting enzyme 2 receptor for the viral spike protein [2]. Currently, no cases of co-infection with COVID 19 and CV-B causing pericarditis have been reported in the English literature. Though mainstay treatments for viral pericarditis are NSAIDs/ high dose aspirin, and steroids are a second-line treatment for CV-B infection. In contrast, steroid treatment is the first line of treatment for patients in the cytokine storm phase of COVID 19 [3].

CONCLUSIONS: Given recent times, pericarditis from COVID 19 has been reported. However, it is important to consider other viral etiologies of pericarditis such as CV-B as treatment guidelines for COVID 19 are still evolving.

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REFERENCE #3: The RECOVERY Collaborative Group. Dexamethasone in hospitalized patients with covid-19—preliminary report. New Engl. J. Med. 2020

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